40. I claim:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (New): A sugar juice clarification apparatus comprising of;
   a cylindrical clarification tank where the contents of mixed sugar juice is allowed to clarify by means of the settlement of the precipitate (mud) and the consequential vertical rise of the clear juice in the shortest possible time being achieved by means of the complete elimination of internal hydraulic turbulence, lateral cross currents, subsequent eddy currents and stagnant zones within the juice content volume of the said cylindrical clarification tank, which is achieved by the introduction of mixed sugar juice and the extraction of clarified juice and precipitate (mud) through;

   an externally driven, slowly rotating, hollow, submerged arm and hub assembly that incorporates internal separated passage chambers through which the introduction of mixed sugar juice and simultaneously, the extraction of clear (clarified) juice and precipitate (mud) occurs as the arm rotates about the center of the clarification tank, thereby extracting the risen, clarified sugar juice from the top of the content of the said tank immediately in front of the rotating arm through;

   a series of adjustable weir slots on the top of the leading edge of the rotating arm, connected to the upper chamber within the rotating arm, which provide for the even extraction of risen clarified juice off the top surface of the clarifier contents, immediately in front of the rotating arm thus ensuring minimal disturbance of the contents of the clarifier by regulating the rate of clarified juice removal directly in proportion to the rate of reduction of the volume of the contents of the clarifier tank being displaced by the forward rotary movement of the hollow, submerged arm, which also incorporates;

   a series of adjustable aperture slots on the bottom of the leading vertical face of the rotating arm, connected to the lower chamber within the rotating arm, which provide for the even extraction of settled precipitate (mud) off the bottom surface of the

clarifier contents, immediately in front of the rotating arm thus ensuring minimal disturbance of the contents of the clarifier by regulating the rate of settled precipitate (mud) removal directly in proportion to the rate of the reduction of the volume of the contents of the clarifier tank being displaced by the forward rotary movement of the hollow, submerged arm, which also incorporates;

a series of adjustable aperture slots on the trailing vertical face of the rotating arm, connected to the central chamber of the rotating arm, which provide for the even volumetric replacement of the extracted clarified juice and precipitate (mud) with incoming, unclarified, mixed sugar juice into the contents of the clarifier, immediately behind the rotating arm thus ensuring minimal disturbance of the contents of the clarifier by regulating the rate of incoming flow of the mixed sugar juice to exactly balance the rate of removal of the clarified juice and settled precipitate (mud), thus providing;

the maximum cylindrical volume for the majority of the liquid contents of the clarifier tank, undisturbed by any internal hydraulic turbulence, lateral cross currents and subsequent eddy currents.

1.23.06

RICHARD WILFRED WRIGHT.

Subscribed and sworn to before me, Jessica G. Braun, notary public. My commission expires upon death.
State of Louisiana
Parish of East Baton Rouge
Bar Roll NO. 26211

Jessica G. Braun

Jessica G. Braun

40. I claim:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (New): A sugar juice clarification apparatus comprising of;
   a cylindrical clarification tank where the contents of mixed sugar juice is allowed to clarify by means of the settlement of the precipitate (mud) and the consequential vertical rise of the clear juice in the shortest possible time being achieved by means of the complete elimination of internal hydraulic turbulence, lateral cross currents, subsequent eddy currents and stagnant zones within the juice content volume of the said cylindrical clarification tank, which is achieved by the introduction of mixed sugar juice and the extraction of clarified juice and precipitate (mud) through;

   an externally driven, slowly rotating, hollow, submerged arm and hub assembly that incorporates internal separated passage chambers through which the introduction of mixed sugar juice and simultaneously, the extraction of clear (clarified) juice and precipitate (mud) occurs as the arm rotates about the center of the clarification tank, thereby extracting the risen, clarified sugar juice from the top of the content of the said tank immediately in front of the rotating arm through;

   a series of adjustable weir slots on the top of the leading edge of the rotating arm, connected to the upper chamber within the rotating arm, which provide for the even extraction of risen clarified juice off the top surface of the clarifier contents, immediately in front of the rotating arm thus ensuring minimal disturbance of the contents of the clarifier by regulating the rate of clarified juice removal directly in proportion to the rate of reduction of the volume of the contents of the clarifier tank being displaced by the forward rotary movement of the hollow, submerged arm, which also incorporates;

   a series of adjustable aperture slots on the bottom of the leading vertical face of the rotating arm, connected to the lower chamber within the rotating arm, which provide for the even extraction of settled precipitate (mud) off the bottom surface of the

clarifier contents, immediately in front of the rotating arm thus ensuring minimal disturbance of the contents of the clarifier by regulating the rate of settled precipitate (mud) removal directly in proportion to the rate of the reduction of the volume of the contents of the clarifier tank being displaced by the forward rotary movement of the hollow, submerged arm, which also incorporates;

a series of adjustable aperture slots on the trailing vertical face of the rotating arm, connected to the central chamber of the rotating arm, which provide for the even volumetric replacement of the extracted clarified juice and precipitate (mud) with incoming, unclarified, mixed sugar juice into the contents of the clarifier, immediately behind the rotating arm thus ensuring minimal disturbance of the contents of the clarifier by regulating the rate of incoming flow of the mixed sugar juice to exactly balance the rate of removal of the clarified juice and settled precipitate (mud), thus providing;

the maximum cylindrical volume for the majority of the liquid contents of the clarifier tank, undisturbed by any internal hydraulic turbulence, lateral cross currents and subsequent eddy currents.